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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,839	10/22/2003	Clement Hiel	CTC001-2	5404

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EXAMINER	
NGUYEN, CHAU N	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/690,839	HIEL ET AL.	
	Examiner	Art Unit	
	Chau N. Nguyen	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-90* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-12,16-19,22,24-35,37-39,43-45,47-51,53,54,56,63,64,67-79,81,82 and 84* is/are rejected.

7)☒ Claim(s) *9,13-15,20,21,23,36,40-42,46,52,55,57-62,65,66,80,83 and 85-90* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 47-51, 53, 54, 56, 75-79, 81, 82 and 84 is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claims 48, 50, 76 and 78 are objected to because of the following informalities:

in claim 48, line 3, change "and opening" to --an opening--,

in claim 50, line 3, change "and opening" to --an opening--,

in claim 76, line 2, change "and" to --an--,

in claim 78, line 2, change "and" to --an--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 47-51, 53, 54 and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Berndt (2,988,727).

Berndt discloses a compression fitting dead end (Figure 10) to terminate a conductor, comprising a compressible body (51) having a cavity, a rigid enclosure (43) encapsulating the compressible body to prevent the body from expanding when compressed, the rigid enclosure having at least one opening to expose the at least one cavity to enable the body to mate with a core of the conductor, a connector (42) being attached to the rigid enclosure at the at least one opening and being connected to a structure (not shown) that holds the dead end (col. 4, lines 49-50), a compression element (62) that fits into the at least one opening and compresses the compressible body, wherein compressing the compressible body holds the core of the conductor with frictional forces. Noted that the fitting dead end of Berndt can be used to terminate an aluminum conductor composite core reinforced cable having a composite core which will be mate with the cavity of the compressible body since the fitting of Berndt comprises structure and material as claimed. Berndt also discloses the compressible body being an elongated cylindrical body having a first end, wherein a first cavity creates an opening in the

first end and axially extends along the length of and within the compressible body almost to an endpoint of the body (re claim 48), the first cavity mating with the core of the cable (re claim 49), the compressible body being an elongated cylindrical body having a first end, wherein the cavity creates an opening in the first end and axially extends along the entire length of and within the compressible body (re claim 50), the core of the cable being inserted into the cavity at the first end (re claim 51), the rigid enclosure being a tube with a first open end and a second open end that accepts the compressible body (re claim 53), the first open end allowing the core of the cable to mate with the compressible body and the second open end being attached to the connector (re claim 54), and the rigid enclosure being a steel tube (re claim 56).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-8, 10-12, 16-19, 22, 24-35 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (4,627,490).

Moore discloses a compression fitting comprising a compressible body (45, Figure 2) having at least one cavity to mate with the core of a first cable and the core of a second cable, a rigid enclosure encapsulating the compressible body to prevent the body from expanding when compress, the enclosure having at least one opening to expose the at least one cavity to enable the body to mate with the core, and at least one compression implement (55) that fits into the at least one opening, wherein the compression implement compresses the compressible body, and wherein compressing the compressible body holds the core of the cables with frictional forces (re claims 1, 28). Moore does not specifically disclose the fitting is used to connect a first aluminum conductor composite core reinforced cable and

a second aluminum conductor composite core reinforced cable. However, it would have been obvious to one skilled in the art to use the fitting of Moore to connect a first aluminum conductor composite core reinforced cable and a second aluminum conductor composite core reinforced cable since the fitting of Moore comprises structure and material as claimed and since it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Moore also discloses the compressible body being an elongated cylindrical body having a first end and a second end, wherein a first cavity creates an opening in the first end and axially extends along the length of and within the compressible body almost to a midpoint of the compressible body, and wherein a second cavity creates an opening in the second end and axially extends along the length of and within the compressible body almost to the midpoint of the compressible body (re claims 2, 29), the first cavity mating with the core of the first cable and the second

cavity mating with the core of the second cable (re claims 3, 30), the compressible body being an elongated cylindrical body having a first end and a second end, the cavity creates and an opening in the first end and the second end and axially extending the entire length of along and within the compressible body (re claims 4, 31), the core of the first cable being inserted into the cavity at the first end and the core of the second cable is inserted into the cavity at the second end (re claims 5, 32), the compressible body is an elastomer (re claims 6, 33), the rigid enclosure is a tube with a first open end and a second open end that accepts the compressible body (re claims 7, 34), the first open end allowing the core of the first cable to mate with the compressible body and the second open end allowing the core of the second cable to mate with the compressible body (re claims 8, 35), the at least one compression implement (55) being a compression nut that threads into the at least one opening of the rigid enclosure, wherein the compression nut compresses the compressible body (col. 4, lines 11-45) (re claims 11, 38), a washer (15) placed between the compression nut and the compressible body in the at least one opening to prevent binding in the compressible body when the compression nut is turned (re claims 12, 39), and a void being created between the conductor and the compressible body (re claim 22). Re claims 10 and 37, it would have been obvious to one skilled in the art to use steel for rigid enclosure of Moore since steel is well-

known in the art for being used as enclosure because of its corrosion resistance. Claims 16-19 are method counterparts of claims 1 and 12. Re claims 24-25, it would have been obvious to one skilled in the art to use a suitable compressive force in the fitting of Moore to meet the specific use of the resulting device since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claims 26-27, the splice of Moore can maintain a tension in the cable of greater than 33,000 pounds since it comprises structure and material as claimed.

8. Claims 43-45, 63, 64 and 67-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quesnel et al. in view of Blucher (2005/0061538).

Quesnel et al. discloses a mechanical fitting (Figure 8) to connect a first aluminum conductor composite core reinforced cable and a second aluminum conductor composite core reinforced cable, each cable having a composite core surrounded by a conductor, comprising at least one compressing body having at least one cavity to mate with composite core from the cable, wherein the at least one compressing body is fixed to the core; and a rigid enclosure, wherein the rigid enclosure encapsulates the at least one compressing body; wherein tension on the

cable causes the at least one compressing body to compress the core (re claim 43). Quesnel et al. also discloses the at least one compressing body being formed from at least two sections, and wherein the at least two sections close together to compress the composite core (re claim 44), the at least two sections have an indention on an inner surface along a longitudinal axis, the indention on the at least two sections form a lumen inside the at least one compressing body when the at least two sections are brought together, and wherein the lumen accepts the composite core (re claim 45). Quesnel et al. also discloses a method to terminate a cable comprising exposing a core of the cable, inserting the core of the cable into a compressing body, compressing the body to hold frictionally the core of the cable, coupling a connector to the body and attaching the connector to a structure to physically terminate the dead end (Figure 7) (re claim 63), inserting the body into a rigid enclosure (re claim 64), slipping a conductor sleeve (48) over the dead end to conduct electricity from the conductor of the cable (re claim 67), a jumper terminal (22) being attached to the conductor sleeve to conduct electricity from the conductor sleeve to the end user (re claim 68), and a void being created between the conductor on the cable and the compressible body when the compressible body is compressed (re claim 69). Re claim 70, it would have been obvious to one skilled in the art to fill the void of Quesnel et al. with a substance to prevent

moisture penetrating the void since using a substance to fill a void to prevent moisture penetrating the void is known in the art. Re claims 71 and 72, it would have been obvious to one skilled in the art to use a suitable compressive force in the fitting of Quesnel et al. to meet the specific use of the resulting device since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claims 73 and 74, the splice of Quesnel et al. can maintain a tension in the cable of greater than 33,000 pounds since it comprises structure and material as claimed.

Quesnel et al. does not disclose the aluminum conductor composite core comprising a plurality of fibers embedded in a resin matrix. Blucher discloses a conductor composite core comprising a plurality of fibers (12) embedded in a resin matrix (14, [0013]). It would have been obvious to one skilled in the art to use the composite core as taught by Blucher for the composite core (36) of Quesnel et al. since the composite core taught by Blucher provides a relatively high strength without expensive cost to manufacture.

9. Claims 75-79, 81, 82 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt in view of Goldsworthy et al. (2004/0026112).

Berndt discloses the invention substantially as claimed, see the 102 rejection above, except for the cable being an aluminum conductor composite core reinforced cable. Goldsworthy et al. discloses an aluminum conductor composite core reinforced cable. It would have been obvious to one skilled in the art to use the cable as taught by Goldsworthy et al. with the terminal of Berndt for transmitting electrical signals since the cable of Goldsworthy et al. provides both electrical conductivity and strength.

Allowable Subject Matter

10. Claims 9, 13-15, 20, 21, 23, 36, 40-42, 46, 52, 55, 57-62, 65, 66, 80, 83, and 85-90 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 47 and 75 have been considered but are moot in view of the new ground(s) of rejection.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chau N Nguyen
Primary Examiner
Art Unit 2831